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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,049	06/04/2002	Gunter Ritter	6235-16=DCL	6718
23552	7590	11/29/2005	EXAMINER	
MERCHANT & GOULD PC			WARE, DEBORAH K	
P.O. BOX 2903			ART UNIT	
MINNEAPOLIS, MN 55402-0903			PAPER NUMBER	

1651

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/088,049		RITTER, GUNTER	
	Examiner		Art Unit	
	Deborah K. Ware		1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/15/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 19-36 are presented for reconsideration on the merits.

Response to RCE and Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 15, 2005, has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35 recites the limitation "said dosages which single or multiple component" in line 4. There is insufficient antecedent basis for this limitation in the claim. Note that the kit is drawn to a multiple component and not a single component.

Art Unit: 1651

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 19-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 296 17 181 in view of DE 197 04 953, DE 195 33 994, CENTRUM, and newly cited Bioremediation Engineering (1995- author: Cookson, Jr.), and JP-61-96959, all cited on enclosed PTO-1449 Form.

Claims are drawn to process for improvement of water quality by adding various substances, such as calcium salts of an organic carboxylic acid, water-soluble N-free compound, alkali metal or earth metal salt, a decomposable compound. Further, a kit and product thereof are claimed.

DE 296 17 181 teaches addition of magnesium salts, and effects thereof, for which to increase hardness, etc. Also adjustment of the Ca:Mg balance and pH stability

Art Unit: 1651

are disclosed, note page 11, all lines. Advantages are also disclosed with respect to the magnesium salt of an organic carboxylic acid.

DE 197 04 953 also describe Also adjustment of the Ca:Mg balance and pH stability are disclosed, note column 1, lines 64-68 and column 5, lines 26-34. .

Advantages are also disclosed with respect to the magnesium salt of an organic carboxylic acid.

DE 195 33 994 teaches selection of specific substances, citrate, etc, for which one may add thereto.

CENTRUM as cited on enclosed PTO-1449 Form discloses a product characterized in that it comprises *calcium*, iron fumarate, lactose, earth metal salt, magnesium stearate and vitamins B1, B2, B6 and B12, and folic acid. See the entire document which also provides an written insert for dosages in tabulated form.

Cookson teaches microorganisms obtain energy by a complex sequence of redox reactions, oxidation-reduction reactions wherein oxidation is the removal of electrons from an atom or molecule and reduction is the addition of electrons, page 52, last paragraph, lines 1-5. For example, ferric ion reduction of Fe^{3+} , note Table 3.1 of page 55. Other growth nutrients are disclosed at pages 92-93, all lines, and when one of these essential elements is not present in adequate quantities, microbial growth is limited and this condition is stated by Liebig's law of the minimum. Overall, careful control of microbial metabolism in a biological maintenance system can improve water quality, note page 135, all lines. Applicants please note this entire book is available from a library for Applicants' convenience, excerpts are referred to but can not be

Art Unit: 1651

reproduced by examiner due to requirement of written permission by author which examiner does not have at this time.

JP-61-96959 teaches a composition comprising iron citrate, citric acid, metal salt, calcium phosphite and thiamine, and folic acid, the composition is useful for improving water quality for solutions used in fish breeding. Note the abstract.

The claims differ from '181 in that the Ca-Mg balance and pH stability as well as other specific combination of substances are not disclosed.

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to combine the cited prior art references noted above to provide for the process of improving water quality, and kit as well as product therefore. The art clearly recognizes combination of substances to combat water quality issues. To modify the cited references is clearly obvious because the ingredients as claimed herein are also disclosed by the cited prior art to be useful for treating water. Cookson also provides a teachings relating to carefully controlling nutrients for microbial metabolism to degrade harmful compounds such as pesticides, etc. The effects and properties of the ingredients would have been expected to provide for successful results upon the use for water treatment. The product and kit, therefore, are clearly an obvious modification of adding the varied ingredients for improving water quality as taught by the cited prior art.

Phosphate concentrate, for example, would have been expected to be lowered by adding other elements of which would promote a decrease in phosphate. When you add more of one substance over another over a period of time, there is an expectation

Art Unit: 1651

that the substance you add will be in higher amounts than the one you have not added. Thus, to select for an element for which to lower an amount of is within the skill of an ordinary artisan.

Lowering nitrate concentration and increasing harness, and increasing carbon dioxide are all properties that can be manipulated by the addition or deletion thereof to a water environment over time. To select for specific amounts for which to add for a lowering and/or increasing is again noted to be a matter of judicious selection and within the skill of an artisan. Further, to vary the amounts, therefore, is also within and skill of the artisan. Thus, one of skill would have been motivated to select for these combinations of ingredients in the amounts and concentrations as set forth in the claims. In the absence of persuasive evidence to the contrary the claims are rendered prima facie obvious.

Response to Arguments

Applicant's arguments filed July 28, 2005 and August 15, 2005, respectively, have been fully considered but they are not persuasive. The arguments regarding the references applied of record are noted. With respect to Centrum, the argument that there is no motivation to combine is noted, however, the reference clearly teaches the nutritive value of the magnesium/calcium balance. Thus, since it is disclosed as being used in a vitamin, hence it would have been obvious to use these individual components for their nutritive value with other ingredients for purpose of treating water quality since these components would have been expected to provide successful results for biological decomposition.

The deficiency of the JP reference is noted, however, the reference does indeed teach the nutritive value of the ingredients disclosed by the reference which again would have been obvious to combine with the primary reference for purpose of treating water quality since these components would have been expected to provide successful results for biological decomposition. Overall, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., addition of chemicals without distributing the precipitation in aquarium-water and skin contact with aquatic animals, as well as filter material and use in aerobic areas of a fish tank and using the metabolism of microorganisms to form waste which is removable from the biological system) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to reference, DE '181, In response to applicant's argument that the reference does not teach suitability of the organic salts for water treatment, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences

Art Unit: 1651

would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). With respect to DE '953 and DE '994, the argument that the references do not describe the same interaction because of the lacking of filtering units but the claims do not require any filtering units per se. Also the same compounds can have different uses and still be expected to function the same because of their functional equivalency of which is recognized in the prior art. Further, the argument that CENTRUM is not prior art is noted, however, the reference clearly teaches magnesium and calcium as well. Thus, while Eisen-II-fumarat may not be of trivalent form, the reference also discloses Calcium in its divalent form.

All claims fail to be patentably distinguishable over the state of the art discussed above. Therefore, the claims are properly rejected and deemed to be prima facie obvious over the cited prior art.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah K. Ware whose telephone number is 571-272-0924. The examiner can normally be reached on 9:30-6:00.

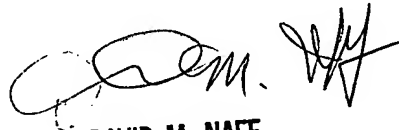
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1651

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Deborah K. Ware
November 26, 2005



DAVID M. NAFF
PRIMARY EXAMINER
ART UNIT 1651